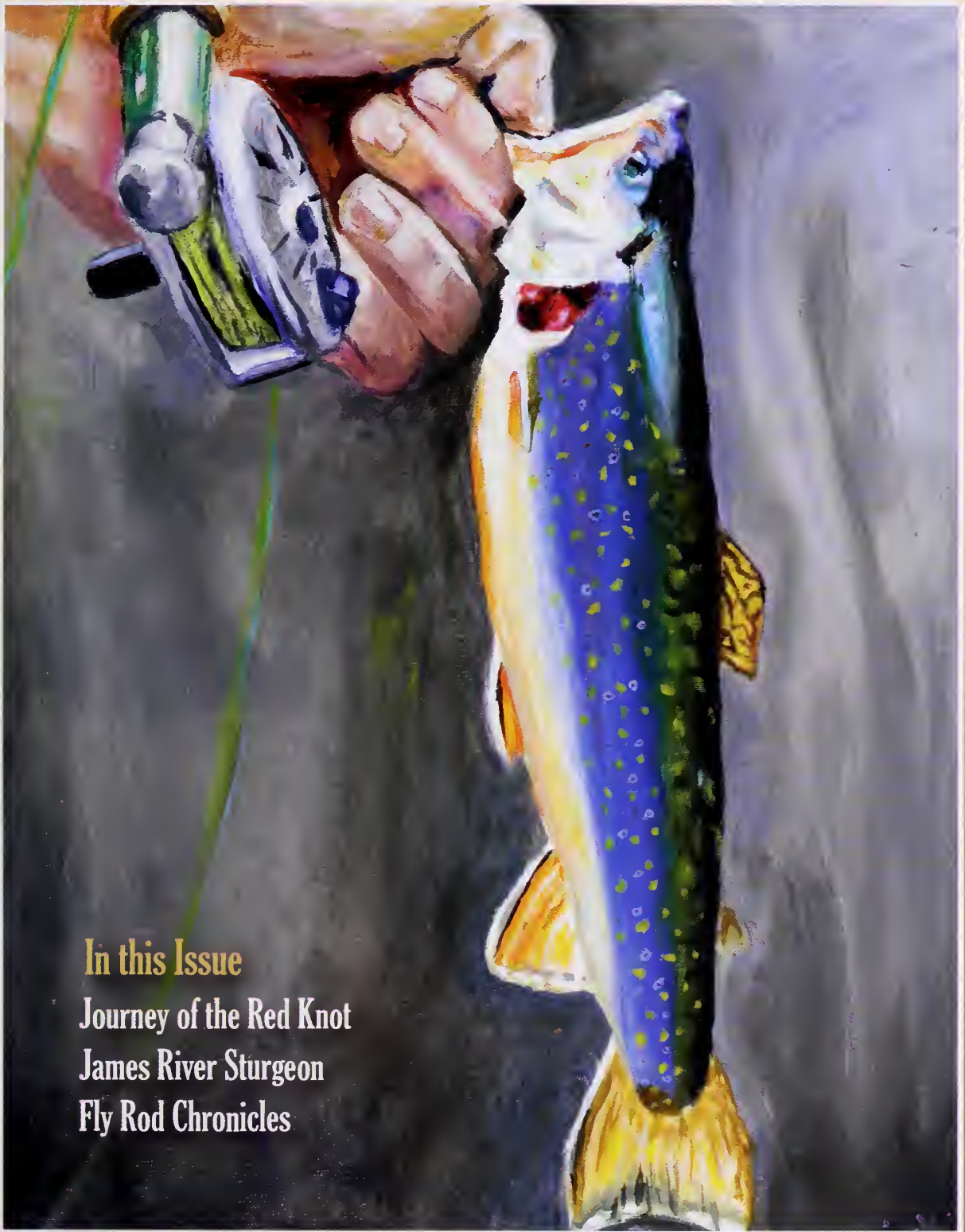


VIRGINIA WILDLIFE

APRIL 2011

FOUR DOLLARS



In this Issue

Journey of the Red Knot

James River Sturgeon

Fly Rod Chronicles

APRIL 20



ABOUT THE COVER: This issue of *Virginia Wildlife* is dedicated to the spirit of fly fishermen everywhere; and especially, to cover artist W. Patrick Gorman, whose love of the outdoors and vibrant paintings uplifted all who knew him. Photo of artwork, courtesy of David Everett.

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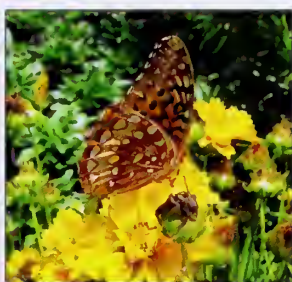
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BOB DUNCAN
Executive Director

Over the years, our Department has been fortunate enough to acquire more than 201,000 acres of land across the commonwealth, designated as wildlife management areas (WMAs). These properties are managed specifically for wildlife, and we appreciate the sportsmen and sportswomen and partner organizations whose support has made that possible. While traditionally those acres were acquired and operated expressly for such game species as deer, bear, turkeys, and waterfowl, we recognize and appreciate their value to nongame species and to the people who wish to recreate and pursue wildlife in a more passive manner—such as through hiking, photography, fishing, and birding.

As we look down the road and plan for the future, we are developing a statewide management plan for these WMAs based upon input received from constituents during a series of public meetings held in March. We asked supporters to tell us how they use and benefit from the time they spend on our publicly-managed lands.

This survey is timely because we know from recent headlines that the population in Virginia has just reached a new milestone. Latest census data (2010) reveal that we have crossed the 8,001,000 mark. That number represents a significant 13% increase over the previous decade-mark census of 2000, in a region experiencing the greatest rate of growth nationally. The information is important in guiding public policy as it relates to wildlife management, and in the face of such human growth, it underscores the critical role that public lands play today.

And while some folks question the value of public lands, I believe their importance will only increase in the future! Consider that so many animals—including those whose populations are most at risk—inhabit or visit these WMAs and other public holdings like state or national forests and parks. It is something that eludes our attempts to assign a value in dollars and cents, but we have much to celebrate and be thankful for.

This year, Virginians also celebrate the 75th anniversary of their state parks. Visitors are not surprised that our parks have been consistently recognized as the nation's best. So I encourage you to get out and discover a new park or a new wildlife management area this spring. Join the growing cadre of Virginians who deeply appreciate and defend the need for places of refuge that not only support native wildlife, but offer sustenance and renewal to the human spirit.

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To manage Virginia's wildlife and inland fish to maintain optimum populations of all species to serve the needs of the Commonwealth; To provide opportunity for all to enjoy wildlife, inland fish, boating and related outdoor recreation and to work diligently to safeguard the rights of the people to hunt, fish and harvest game as provided for in the Constitution of Virginia; To promote safety for persons and property in connection with boating, hunting and fishing; To provide educational outreach programs and materials that foster an awareness of and appreciation for Virginia's fish and wildlife resources, their habitats, and hunting, fishing, and boating opportunities.

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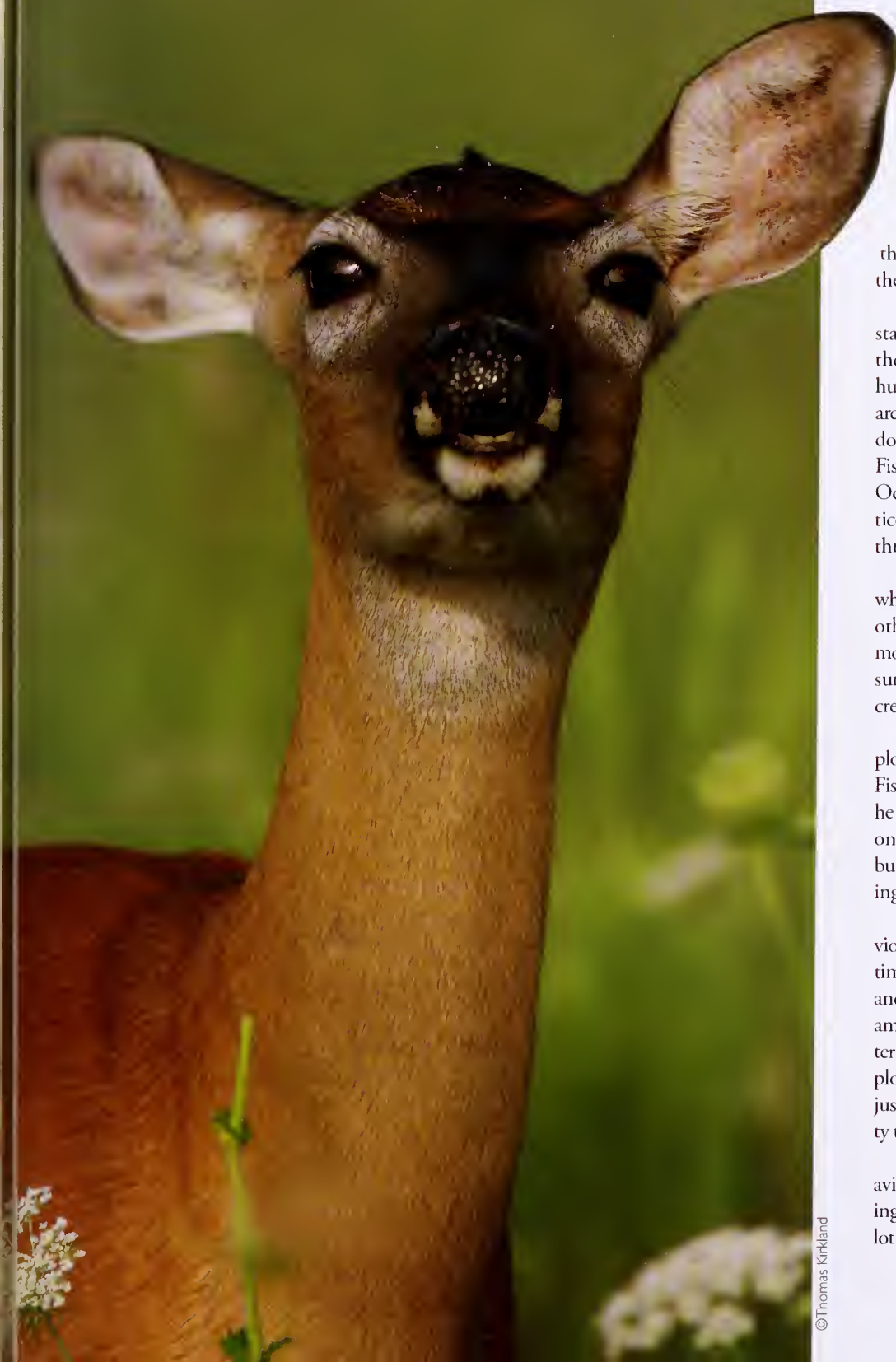
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FOOD PLOTS 101:

Get Started

by David Hart



The deer hunting was pretty good on Marvin Fisher's 160-acre farm when he bought it ten years ago, but the Prospect resident wondered if it could actually be better.

"We saw some deer during the season, but they just didn't seem to stay on our land much the rest of the year," he recalls.

That changed six years ago after Fisher started experimenting with food plots. Although they are planted primarily by deer hunters looking for an edge, food plots—an area planted with something to attract game—don't draw deer just during hunting season. Fisher and his family not only saw more deer in October, November, and December, they noticed an overall increase in wildlife in general throughout the year.

"We see a lot more deer all year now, which we really like. We see more turkeys and other game animals and we also notice a lot more other wildlife on our land. I can only assume that's because we planted food plots and created other wildlife-friendly habitat," he says.

You certainly don't need to plant a food plot to have a successful deer season, but as Fisher learned, they can sure help. Not only has he seen more deer in the five acres of food plots on his land, he has taken some respectable bucks in and around them and his success during spring gobbler season has also gone up.

Food plots have another, perhaps less obvious, benefit: They are a great excuse to spend time outdoors. Fisher runs a drywall business and raises cattle on his farm. Both take a large amount of time. He looks forward to those afternoons when he and his boys can tend their plots. Whether planting, spraying, mowing, or just walking those fields, it's a great opportunity to bond with his children.

"It's something we do together. They are avid hunters, so they take a direct part in planting as well as hunting the plots," he says. "It's a lot like growing your own vegetables."

WHAT TO PLANT

Some food plot seeds actually *are* vegetables, but Fisher says there's no better choice than white clover. In fact, if he had to choose a single plant, he'd choose white clover. It's not only easy to grow, deer devour it virtually all year. Turkeys also love it; so do rabbits. Birds will feed on the insects that thrive in clover and some will even nest in it. A well-maintained stand of white clover can last at least three years or more. However, instead of using *any* variety, Fisher recommends using a seed cultivated specifically for deer.

"There is a difference. I've tried clover sold as cattle forage and the deer definitely prefer the deer-specific varieties," he says.

Clover grows best when it is planted in the fall, usually mid-September into October, and will take off and flourish the following spring. Fisher, however, has had good success by top-sowing white clover directly on snow in the late winter.

"That's the great thing about clover. You don't have to turn any soil to get it established. I'll just spray an area with Roundup® in the late summer and then top-sow white clover in the early fall or in the late winter," he explains. "As long as there is good rainfall, it will do well."

©David Hart



©David Hart

White clover (L) is one of the best choices for food plots. Easy to grow, it attracts deer, turkeys, and rabbits. Above, hunters Marvin Fisher and son Danny inspect a food plot that the family helped to plan and maintains.



©David Hart

BRASSICAS

He also likes various brassicas, which include turnips, kale, rape, and even broccoli, although most food plot brassicas are turnips or rape. Like clover, brassicas also work best when planted in the fall and will provide excellent late-season forage, typically after a hard frost or freeze. Deer often won't touch brassicas until the plants have been subjected to cold weather, which changes the molecular structure of the plant and makes it more palatable. Brassicas have a small seed and are easy to grow, but they are annuals, meaning you'll need to plant a new crop each fall.

OTHER CHOICES

Winter wheat is a great food plot choice, too. It's easy to grow and provides high-quality forage through the winter. It can turn into a hot dove field if left to mature in the summer; simply mow or burn it prior to the season.

Deer love corn and beans, but both require specialized equipment to plant and both require a large amount of fertilizer.

"I wouldn't recommend corn or beans unless you have experience farming. I can't say they are any better at attracting wildlife

than clover or something else that's easier to grow, although they do have some advantages," he notes. "Beans are great in the early bow season and corn is a good late-season food source."

TEST THE DIRT

Before you throw the first seed or spread a single bag of fertilizer or lime, it's vital to conduct a soil test. It's a simple, inexpensive step (free through Virginia Tech's cooperative extension offices) that could actually end up saving you money in the long run. A soil test will pinpoint the various nutrients your ground is lacking and it will offer accurate data on the soil's pH level, a critical part of any successful food plot.

"It will also benefit the environment by preventing excess nutrient run-off," says Prince Edward County agriculture and natural resources extension agent Eric Bowen.

Soil test results are based on specific plant types. In other words, the lab conducting the test can offer specific recommendations of fertilizer and lime to suit the plant's needs in conjunction with current soil conditions. Bowen recommends two tests the first year and one every three years after that.



©David Hart

A soil test (top) will save you money by helping you pinpoint your plot's fertilizer and lime needs. Not sure what to plant? Combine three or four different plants or use a commercially-mixed blend.

Food Plots and Bait: Is There a Difference?

Proponents of baiting and feeding deer insist food plots are no different than a pile of corn spread on the ground. Not even close, says Matt Knox, deer project coordinator for the Department. Feeders artificially concentrate deer and other wildlife in confined areas over a prolonged period, increasing the chance of disease and unnatural predation. They also alter deer behavior. A study in South Carolina found that deer in areas with high concentrations of feeders move less in general and more at night than in areas where baiting is illegal. Food plots allow deer to spread out and provide a number of benefits to a wide variety of wildlife that feeders can't.

For Knox, however, the difference is an ethical one. Feeders create a Pavlovian response in whitetails much the same as a farmer blowing his horn to call cattle to the feed trough. The rattling sound of a feeder throwing corn can bring deer running. Food plots, however, make no sound and don't condition deer to feed at any specific time.

The Complete Food Plot

Instead of planting a patch of clover and calling it good, consider making your food plots even better by including field edge habitat. The Virginia Department of Forestry offers low-cost, wildlife-friendly seedlings. Ideally, field buffers should be 30 feet wide, but if space is an issue, do what you can.

A few high-quality plants to consider include lespedeza, indigo bush, and silky dogwood—shrubs that not only provide cover, but food for quail and songbirds. Also consider planting fruit-bearing trees like plums, apples, and persimmons. Plant the lower growing shrubs adjacent to the food plot and the taller trees behind the shrubs.

For ordering information, visit www.dof.virginia.gov.



Herbicides are one of the best tools you can use to establish a food plot and keep it weed-free. Carefully follow label instructions.



Spreading seed, fertilizer, and lime can be done with a hand spreader.

PREP THE BED

Once you've settled on a seed choice and determined nutrient requirements, you need to remove any unwanted vegetation. Although Fisher generally doesn't turn any soil, he says it's important to reduce the existing plant growth as much as possible to allow seeds to reach the ground. He'll start by spraying the area with a non-selective herbicide like Roundup®. It's safe for you and the environment if used properly, but it will kill any plants it comes in contact

with. As with any herbicide, don't apply it before a rain storm and use only in the concentration recommended by the manufacturer.

Fisher will wait a few weeks and then spray again, and a few weeks after that, he'll actually spread seed. Although many food plotters disk the soil prior to seeding, Fisher usually doesn't. Smaller seed like clover and brassicas can be top-sown directly on the ground as long as they can reach the soil and are subjected to a few days of rain.

"I watch the weather. If we are going to get a couple of days of cool rain, I'll put down my clover or brassicas," he says.

Larger seeds like wheat, oats, or peas germinate best when covered by a thin layer of soil, although even they can be top-sown with moderate success. If you don't have a disk, seed heavier than normal. Not all of the seed will germinate and some will likely get eaten by birds.

EQUIPMENT NEEDS

Along with an ATV-mounted or backpack sprayer, you'll need a broadcast spreader and a disk to expose a layer of surface soil. Small ATV-specific disks can work fine, but they often require several passes in order to cut through existing plants and expose earth. Larger disks tend to cut through grass and other plant life better than smaller ones, and they cover more ground with each pass, but they require a tractor.

KEEP IT GOING

Once the plants germinate, there's not much else to do besides watch them grow and then hunt over them. Eventually, though, you'll need to control the weeds that will inevitably grow where you don't want them to. One alternative is to mow the plots twice a year—once in the spring when weeds are beginning to grow above the clover and again in the fall to control weeds and stimulate clover growth. Planting your rows wide enough to accommodate mowing in between helps. Another option is to use a selective herbicide that controls either grasses or broadleaf weeds. Food plot-specific herbicides are available through farm supply stores or through food plot seed companies like Whitetail Institute, which sells an herbicide that is clover-friendly.

No matter what you plant, be prepared to make a few mistakes if you've never tried a food plot before. Fisher admits his first plots didn't do so well, but he's since learned what works and what doesn't.

"It takes time to know what works best for your situation," he says. "Don't take it too serious and have fun."

And remember that a food plot is no substitute for understanding deer or turkey behavior. You still have to hunt, food plot or not. 🦌

David Hart is a full-time freelance writer and photographer from Rice. He is a regular contributor to numerous national hunting and fishing magazines.

JAMES RIVER *Sturgeon*



Looking for evidence of new life from a fish that has seen it all.

by Clarke C. Jones
photos by Dwight Dyke

As fish go, the Atlantic sturgeon will win few beauty pageants. With its rows of bony plates, called scutes, a long snout with dangling, sensory barbels used to find prey, and a tail like a shark, it looks like an animal that has been around since the Cretaceous period *should* look. But what the Atlantic sturgeon lacks in beauty, it makes up for with the will of self-preservation. Over 200 million years ago, it was seeking refuge from predators like the *Mosasaur* or perhaps the *Plesiosaur*. Now it fights for survival against river pollutants,

chemicals, overfishing, and ocean-going vessels that travel up the river James on their way to Richmond. The sturgeon is an anadromous fish like the salmon, meaning that it spawns in freshwater rivers and then moves to the ocean to live; then returns to spawn in fresh water. Early records indicate that as many as 20,000 sturgeon used the James River prior to commercial harvesting in the mid-19th century. It was thought by many that the Atlantic sturgeon no longer exists today in the James, although rumors persisted that they had been seen.

Pretty or not, the Atlantic sturgeon has certainly captured the heart of a number of scientists, environmentalists, and a few corporate leaders here in Virginia. They have undertaken a study to confirm that the Atlantic sturgeon does indeed still spawn in the James River and, with that knowledge, hope to bring it back from what some fear is the brink of extinction.

Monitoring James River Sturgeon Today

On an early summer day in 2010, Lower James Riverkeeper Chuck Frederickson mo-

tors his 23-foot Maritime skiff out of its slip at Jordon Point near Hopewell and points it up-river. Mark Williams, the environmental manager for Luck Stone Corporation, is accompanying us on a search for sturgeon eggs along a manmade reef in the James. The reef was assembled from two full barge-loads of stone, of specific sizes, donated by Luck Stone and placed with the assistance of Norfolk Tug and Coastal Design in hopes that sturgeon would find it a suitable habitat for spawning.

Mark noted that the project really started with the James River Association and Dr. Greg Garman at VCU. Riverkeeper Frederickson applied for a grant from the National Fish and Wildlife Foundation to implement his ideas about creating a spawning reef. It wasn't long before Garman, at the Center for Environmental Studies at VCU, got involved.

"VCU wants to be a recognized educational leader in river studies and our company had worked with VCU on a previous project. Environmental stewardship has been a great tenet of the Luck Stone Corporation since the company started in 1923," notes Williams. Indeed, Luck Stone has a long history of championing environmental projects.



Frederickson brings his boat alongside an area of the reef where we can grab onto a small buoy. Attached to that buoy, at a depth of approximately 14 feet, is a circular floor-polishing mat—like the ones you see used on floors in commercial buildings and public schools. He carefully pulls on the rope to bring the mat to the surface and looks at its underside—which has been lying on the reef. Attached to the bottom of the mat are a number of different types of tiny animal life, including some fish eggs, proving that fish and other creatures have accepted these mats as a viable habitat for safe reproduction. We discover that there are shad, white perch, and other fish eggs present. But we are looking for sturgeon eggs, which are black, and there are no black eggs on this mat. The riverkeeper gently lowers the mat back on the reef. He will return throughout the year, selecting one of the numerous buoys above the reef to repeat this exercise and determine if any sturgeon eggs have collected.

Later in the summer, Frederickson ferries us again up the James. On this trip are Doug Palmore, the vice-president of environmental design and development at Luck Stone, and



On page 9, researcher Matt Balazik places a tagged sturgeon back into the James River. Left, Chuck Frederickson, along with Mark Williams of Luck Stone (R), examines one of the tracking devices that monitor sturgeon in the river.

Luck's stewardship coordinator, Amy Romero, as well as more sophisticated computer and tracking equipment than was on board the *Pueblo*. We have two missions: first, to locate previously tagged sturgeon using Frederickson's high-tech equipment and record our findings; and second, to head about a mile or so west upriver from Hopewell to see if Matt Balazik, a doctoral candidate at VCU, is having any luck catching sturgeon in one of the four 900-foot nets he and his crew have placed in the river.

We get a "ping" from a tagged sturgeon almost immediately after Frederickson lowers his sonar device into the water. With his equipment, he is able to tell us when the fish was tagged, whether it is a male or a female, its general current location, and where it has been. While some sturgeon spawn once a year, it is thought that there may be both a spring and a fall spawning season in the James.

Balazik and his crew of two have finished placing the nets in position. These nets have 12-inch spacing, to allow smaller fish to pass through. Balazik is interested in catching and tagging mature male and female sturgeon. In particular, what he and everyone else involved in this research are looking for is a

Chuck Frederickson carefully studies a reef mat for sign of sturgeon eggs.





gravid sturgeon (gravid, meaning a female fish that is carrying eggs she will release in the water). Finding a gravid fish will be another step in providing proof that sturgeon do in fact spawn in the James. There are strong indications that they do—as young sturgeon had been captured in the river by the Chesapeake Bay Foundation a few years back.

Assisted by his brother Martin and Master's student Bree Langford, Matt Balazik begins to pull on the first 900-foot net but it comes up empty. Martin then motors over to another net. Matt and Bree begin the arduous task of bringing in yet another 900-foot net. It too is empty. At the third net, we see something white entangled within—about 30 yards from Balazik's boat—but it slips away just as he tries to lift it into his vessel. At the fourth net we have luck, but hauling up a 75-pound fighting fish that has no interest in leaving the river is, to put it mildly, quite a delicate and difficult task. The longer the sturgeon is entangled in the net, the more stress it undergoes. Balazik has to bring the fish into his boat and place it in the water-filled holding tank while gathering in the rest of the net, in case more sturgeon are trapped inside. He discovers two more sturgeon, and they also have to be brought into the boat. Balazik then must step into the holding tank—which the 4- to 5-ft. sturgeon really do not appreciate—then lift each fish out so that it can be weighed, measured, sexed, and tagged with a sonar tag. That tag can track the fish's movements for up to three years. Once a sturgeon is tagged, its travels will be monitored by one of the 36 tracking receivers positioned from the mouth of the James to just east of Richmond. Frederickson explains, "We can tell what fish came by, when it came by, and how long it stayed in the area."

Research teams in other states, who track fish in different waterways with the same type of equipment, may also track the tagged sturgeon—which have migrated from the fresh water of the James, through

Bree Langford, in back, records sturgeon data collected by Martin Balazik (L) and Matt Balazik.



Dr. Greg Garman (L) of VCU holds a young sturgeon in the Environmental Studies lab. Above, Doug Palmore and Amy Romero of Luck Stone review sturgeon data.

its life cycle in the ocean, and back again into other rivers. The researchers will then report that information back to VCU and the James River Association. Again, Frederickson explains, “This lets us share our information with other entities conducting fish studies by sending it to a central database.”

Balazik works hurriedly and shouts out the measurements and tag number to Langford, who records everything. A holding tank is not a natural environment for such large fish, and they splash and thrash to escape. Balazik is cognizant of the stress they are under and quickly places the first fish back into the river and retrieves the next. This team will check the nets three to four times a day during spawning season.

Study Objectives

Both VCU and the James River Association hope to confirm, through this research, that James River sturgeon spawn in the James and how often. Dr. Greg Garman, director of VCU’s Center for Environmental Studies, is quick to point out the contribution that Luck Stone has made to sturgeon research here.

“Ever since the Civil War, sedimentation into the James has increased, and most of the hard bottom of the James that has been there historically is now gone. We think the restricted access to that type of hard bottom habitat has been a limiting factor in sturgeon reproduction in the James. If it wasn’t for Luck Stone coming to us and asking, ‘How can we help?’ and then responding positively to our request of providing 2,200 tons of crushed aggregate—it is doubtful this project would have been able to proceed.” Dr. Garman further emphasizes: “Luck Stone also provided certain specified sizes of stone which we felt were necessary to make this a successful project. My point being that the company just didn’t go to any pile of rock they had or just any type of stone in their inventory that they may have wanted to get rid of.”

How long does Dr. Garman think it will take to get definitive results from this study? “We have given ourselves a 5-year time span to see if this project worked by pulling up one of those egg mats at the reef site and finding a little black sturgeon egg underneath,” he answers.



We watch as Balazik places the last tagged sturgeon in the river. Our photographer packs away his camera and Riverkeeper Frederickson points the bow of his boat eastward as we head back to the landing. It is easy to see why everyone who is involved in this project wants to see it succeed. The fact that this fish has survived for millions of years with everything that has been thrown at it makes it hard to accept that its existence might end on our watch. ☞

Clarke C. Jones is a freelance writer who spends his spare time with his black lab, Luke, hunting up good stories. You can read more by Clarke at his website www.clarkecjones.com.

Resources:

James River Association &
Riverkeeper Chuck Frederickson:
www.jamesriverassociation.org

VCU, videos and lesson plans:
www.vcu.edu/lifesci/sosq

A decline in key food sources has been linked to the precarious state of the red knot.

by Glenda C. Booth

Oily black goop from the Deepwater Horizon well blowout was coating birds and globs were oozing toward coastal states in the Gulf of Mexico last May. At the time, a Virginia Tech team of scientists and I were traipsing north on a clean, white stretch of Virginia barrier island beach with not a person, structure, vehicle, or boat in sight and only the sound of waves gently tapping the shoreline.

We were pursuing an amazing bird, the red knot (*Calidris canutus*), a bird with an amusing name and an astounding story.

With a russet-colored face and breast, this nine-inch sandpiper (subspecies *rufa*) performs one of the longest migrations of any bird. From southernmost Argentina and South American spots to the high Arctic and back, it flies 19,000 miles round trip! In 2010, one six-ounce knot, as admirers call it, flew non-stop for six days and nights, covering 5,000 miles between southern Brazil and North Carolina and breaking the previous known record by nearly 700 miles. This global traveler stops on Virginia's barrier islands and the Delaware Bay every spring, starved, thin, and exhausted.

Experts say that many knots synchronize their migration to the spawning of horseshoe crabs in Delaware Bay where the birds gorge on crab eggs for two to three weeks to fatten up—doubling their weight for their flight to

their Arctic breeding grounds. One bird can gobble up to 25,000 eggs a day. Virginia Tech's Jonathan Cohen says the "rufa-horseshoe crab egg relationship is unique in the world."

A Refueling Station

Deserved attention often focuses on the red knots that visit Delaware Bay. While that egg-eating frenzy is no doubt impressive, Virginia can lay claim to its very own red knot spring "spectacle."

Around 27 to 30 percent of the East Coast population of migrating knots visit Virginia's barrier islands, an area that has no significant spawns of horseshoe crabs. There, knots eat the coquina clam (*Donax variabilis*), blue mussels, amphipods, and polychaete worms in the intertidal zone, say Tech's scientists. They study knots on the ground while William and Mary's Bryan D. Watts and Barry Truitt, Nature Conservancy, conduct aerial surveys.

WHAT IS THE RED KNOT TEL



This string of 18 islands, a shifting “pile of sand,” is the longest expanse of coastal wilderness on the eastern seaboard, forming a tapestry of maritime forests, shrub thickets, brackish ponds, lagoons, salt marshes, sea-level fens, eelgrass beds, grass-covered dunes, and wide expanses of sand.

The area claims several important designations, including a United Nations International Man and the Biosphere Reserve, a Globally-Important Bird Area (Western Hemisphere Shorebird Reserve Network), and an Audubon Important Bird Area (IBA). Around 95 percent of the islands is protected by the Nature Conservancy, Virginia’s Department of Conservation and Recreation (Wreck Island Natural Area Preserve), the U.S. Fish and Wildlife Service (FWS), and this Department (Mockhorn Wildlife Area).

Nature thrives.

The Knot’s Precarious Status

Numbers don’t lie. The overall numbers of red knots have plummeted an alarming 80 to 90 percent in 30 years, from an estimated 100,000–150,000 to below 30,000, scientists agree. Since the mid-2000s, populations have been relatively stable at low levels, reports the FWS Spotlight Action Plan.

How many red knots use Virginia’s islands in the spring? The numbers vary greatly, stresses Fraser, but probably 6,000 to 8,000 knots stop there. Aerial surveys conducted by Watts and Truitt in May estimated 8,100 at their peak in one day in 2010.

Virginia’s *Wildlife Action Plan* identifies the knot as a “species of greatest conservation

need.” The Western Hemisphere Shorebird Reserve Network calls the *rufa* red knot “highly imperiled.” FWS says it warrants protection as a federal endangered species, but listing is “precluded by higher priority listing actions for species at greater risk.” Audubon scientists say the knot is in danger of extinction.

Finding Answers and Solutions

Since 2006, the Virginia Tech team has spent six weeks on the islands studying knots. When they catch the birds, they record weight and body measurements and snap on a light green flag that denotes that the bird was caught in the United States and



Above, a red knot resting; below, a pair of horseshoe crabs mating. Both images courtesy of Gregory Breese, FWS. Left, red knots feed on horseshoe crab eggs in Delaware Bay, NJ. ©Lynda Richardson



©Glenda Booth

©Glenda Booth

Belita Marine waits in the dunes to detonate the cannons that propel the catch net over birds in the catch zone.



The Virginia Tech team furls the net under the direction of Dr. Jim Fraser.

a numbered flag as an individual identifier. They attach radio tags to some to track movements. This team and others are trying to answer several questions.

Why do the knots concentrate in Delaware Bay? Red knots may once have been up and down the entire Atlantic Coast. FWS experts say that their historic range spanned from Maine to Florida, Louisiana, and Texas. Congregating in Delaware Bay may be a response to coastal development, the fact that very little habitat remains undeveloped, says Fraser.

What do they eat? Researchers are analyzing feces and the food supply from 349 substrate samples. "Virginia's" knots primarily eat *Donax* clams, concludes Fraser.

Can knots gain enough weight eating bivalves to make their journey to the Arctic? Fraser is comparing the caloric value of crab eggs and clams. The birds arrive weighing around three ounces ("Real skinny," he says) and gain up to eight.

Are knots in equilibrium with the available horseshoe crab eggs? Are horseshoe crabs over-exploited? Have the number of knots declined because available horseshoe crab

eggs have declined from over-harvesting or other causes? The impact of the harvesting of horseshoe crabs on the red knot generates an ongoing discussion and analysis.

"The number of horseshoe crab eggs was the most important factor determining the use of Delaware Bay beaches by red knots . . ." wrote Tech scientist Sarah Karpanty in a 2006 *Journal of Wildlife Management* article, observing that in the past two decades, "a decreasing proportion of red knots has reached the weight required to complete the northward migration from Delaware Bay."

One surprising finding is that some knots move between Virginia and Delaware Bay during their migratory stopover. This indicates more flexible migratory movements than previously thought and emphasizes the importance of the entire mid-Atlantic coast to their journey.

Do knots feed during the night? Brian Gerber, a graduate student, roamed Wreck Island all night with a night-vision scope and found 150 knots feeding. "They were going nuts on the peat banks," he reports, dispelling the notion that they only roost at night.

Have changes in their breeding grounds

had an impact? In the Arctic, knots eat lemmings and lemmings may be declining. Since lemmings depend on snow cycles, global climate change could reduce their numbers. "We don't have a clue what's going in the Arctic and we need a better handle on what's going on," says Truitt.

Many questions beg for answers. "At one time, knots blackened the sky," says Fraser. "If they become extinct, it would take away something fundamental. Something is wrong in the environment."

Can the Knot Be Saved?

The dramatic decline in numbers and the fact that the knot uses a narrow band of habitats not widely available are special concerns. A large-scale event like an oil spill, the presence of a wind turbine, or stresses on their breeding or wintering grounds could exacerbate their vulnerability.

Habitat inundation from sea level rise, invasive plants, and predator and human disturbances during the nesting season have adverse impacts also.

FWS and an international team at the Manomet Center for Conservation Sciences



Red knots congregate in shallow coastal waters to feed. Courtesy of Gregory Breese, FWS

have developed conservation plans which include steps like enhancing coastal habitats and annually assessing the bird's status.

"What we need," says Truitt, "is a network of sites throughout the hemisphere cover where shorebirds winter, where they stop over, and where they breed, because the impacts at any one of those sites can cause cascading effects in the population."

Many experts link the decline in knot population with the decline of key food resources, such as fewer horseshoe crabs that are taken for bait to catch eels and conch and to support the biomedical industry. "Over-harvest of horseshoe crabs in Delaware Bay and the related degradation of foraging conditions has been one of the leading factors proposed to explain knot declines," says William and Mary's Center for Conservation Biology website. Horseshoe crab fishing increased twenty-fold in the 1990s.

The Atlantic States Marine Fisheries Commission has imposed harvest quotas and a no-harvest zone on horseshoe crabs off the mouth of the Delaware Bay. Virginia, New Jersey, and Delaware limit their catch for bait.

Virginia's *Wildlife Action Plan* calls for long-term planning to stabilize or increase the populations.

A Temporary Haven

After a two-mile trek on a deserted beach streaked in shades of tan and gray like the curvy lines of an oyster shell, we zoomed our binoculars in on a flock of shorebirds foraging in the surf, skittering landward as the waves rippled up the beach. Binoculars focused, "Orange," I scream. "An orange flag!"

"Argentina," yells Fraser. "The knot was banded there."

It took my breath away. This little bird with the funny name goes from one end of the Earth to the other. It reaffirmed my faith in nature to know that this fragile creature found respite and protection on Virginia's coast. It made me a proud Virginian to know that my state could be its host, if only briefly. 🏠

Glenda C. Booth, a freelance writer, grew up in Southwest Virginia and has lived in Northern Virginia over 30 years where she is active in conservation efforts.

RESOURCES

Fact Sheet, U.S. Fish and Wildlife Service
www.fws.gov/northeast/redknot/facts.pdf

Virginia Marine Resources Commission, Regulations addressing the harvesting of horseshoe crabs and commercial fisheries management measures
www.mrc.state.va.us/regulations/fr900.shtm

Virginia's Wildlife Action Plan,
<http://bewildvirginia.org/wildlifeplan/>

Nature Conservancy's Virginia Coast Reserve
www.nature.org/wherewework/northamerica/states/virginia/preserves/art15019.html

Western Hemisphere Shorebird Reserve Network, www.whsrn.org, Information on the status of shorebirds of conservation concern for the western hemisphere and Shorebird Conservation Plan

TINY TURTLE
LOOKING FOR A

Big
CHAMPION



The smallest turtle in the United States faces some of the biggest challenges.

story by Cristina Santiestevan ♦ illustrations by Spike Knuth

Measuring no more than 4½ inches long, bog turtles are the smallest freshwater turtle species in North America. They are also the rarest. Virginia listed bog turtles as endangered in 1987. A decade later, the U.S. Fish and Wildlife Service added them to the Endangered Species List. Bog turtles remain on both lists to this day.

In Virginia, bog turtles are found in just four counties in the southern Blue Ridge—Carroll, Floyd, Grayson, and Patrick. This high, mountainous region is pocked with ideal bog turtle habitat: freshwater wetlands, marshy meadows, and sun-washed springs, streams, and seeps. Yet, even within these four counties, bog turtles are still exceedingly rare. In one recent survey, the Department found bog turtles on only 14 of more than 89 surveyed sites. Current estimates by the North Carolina Herpetological Society suggest Virginia's entire bog turtle population includes no more than 3,000 individuals.

In general terms, the challenges facing bog turtles are not so different than those facing many threatened and endangered species. Their greatest threat? Habitat loss and destruction due to development and other human activities. More specifically, bog turtles suffer when their native wetlands are altered or drained to allow for cropland, golf courses, or houses. In the wrong location, roads can also form lethal barriers between neighboring wetlands. Wetlands, of course, provide a suite of beneficial services, from flood control to water quality improvement.

Invasive plants contribute to the problem by out-competing native ones. Purple loosestrife is one of the worst offenders. In some areas, the plant grows so densely that all other plants are forced out. The result is an inhospitable monoculture which offers neither the food nor the shelter that bog turtles require.

But, habitat destruction and fragmentation is only part of the bog turtles' story. Another factor is working against them. Pint-sized and marked with a splash of bright yellow-orange on the side of their necks, these turtles are simply too cute for their own good. People want them as pets. Although bog turtles have been protected by the Convention on International Trade in Endangered Species (CITES) since 1975, a lucrative illegal pet trade still exists. Individual bog turtles are sold on the black market, tempting poachers to capture and sell them.



Even the largest bog turtles are small enough to be held in the palm of a child's hand. Males and females are essentially the same size, although males generally have a longer tail and a concave plastron (lower shell). Bog turtles are not picky eaters, and will consume a range of plants and animals: insects, earthworms, tadpoles, crayfish and snails, as well as berries, duckweed, and the seeds of pondweed and sedges. The turtles are most active in the morning and evening hours, and typically spend the middle of the day in shallow water or saturated mud. During the hottest weeks of the summer, bog turtles will escape the worst of the heat by burrowing into the cool mud of a wetland.

Bog turtles hibernate during the winter months, seeking shelter from the cold in abandoned muskrat holes, or in clumps of sedges and deep mud. Once spring arrives, the turtles emerge for another season of eating, growing, and breeding. Bog turtles are most active during the spring and early summer months. They breed from late April through early June, and females then lay clutches of three to five eggs in nests of grass, sphagnum moss, or mud. The hatchlings emerge by late summer or early fall. It will be approximately six years before these hatchlings are old enough to breed.

(cont. pg. 21)

ACT WILD

Here are three simple ways you can help Virginia's turtles:

1. Welcome turtles into your yard or garden by planting native flowers and shrubs, which offer both food and shelter. If you have a stream, pond, or marshy area, allow some of it to stay wild with water-loving plants. If a natural water source does not exist, consider adding a ground-level pond or birdbath.
2. Help wild turtles stay wild. Never remove a turtle from its natural environment or move it to another location. There is one important exception: roads. Any turtle found in a roadway should be moved to the side of the road, away from the dangers of vehicles, if safe for you to do so.
3. Turtles do not make good pets. They live a very long time, have strict diet and care needs, and often become ill in captivity. But if you do have a pet turtle, never release it into the wild. Captive turtles can introduce disease and interbreed with wild populations.

Purple loosestrife





Loggerhead sea turtle

don't reproduce until they are five to ten years old, if not older. Some species only lay a few eggs at a time—bog turtles average three to five eggs per nest—and others only reproduce every second or third year. Eggs and hatchlings are also readily eaten by a range of predators, from raccoons and foxes to domesticated dogs and cats. As a result, turtle populations rebound very slowly and may require generations to recover from a threat.

But slow population growth is not a problem unless some outside pressure is contributing to population decline. In the case of turtles, these outside pressures are multiple: habitat loss and degradation, roadway mortality, poaching and over-collection for the pet and food trades, disease, and introduced species. Roads and development top the list of threats for many turtle species. For example, wood turtles have lost half of their range in Virginia to urban development and are now listed as a threatened species in the state.

Learn more about turtle threats and conservation online:

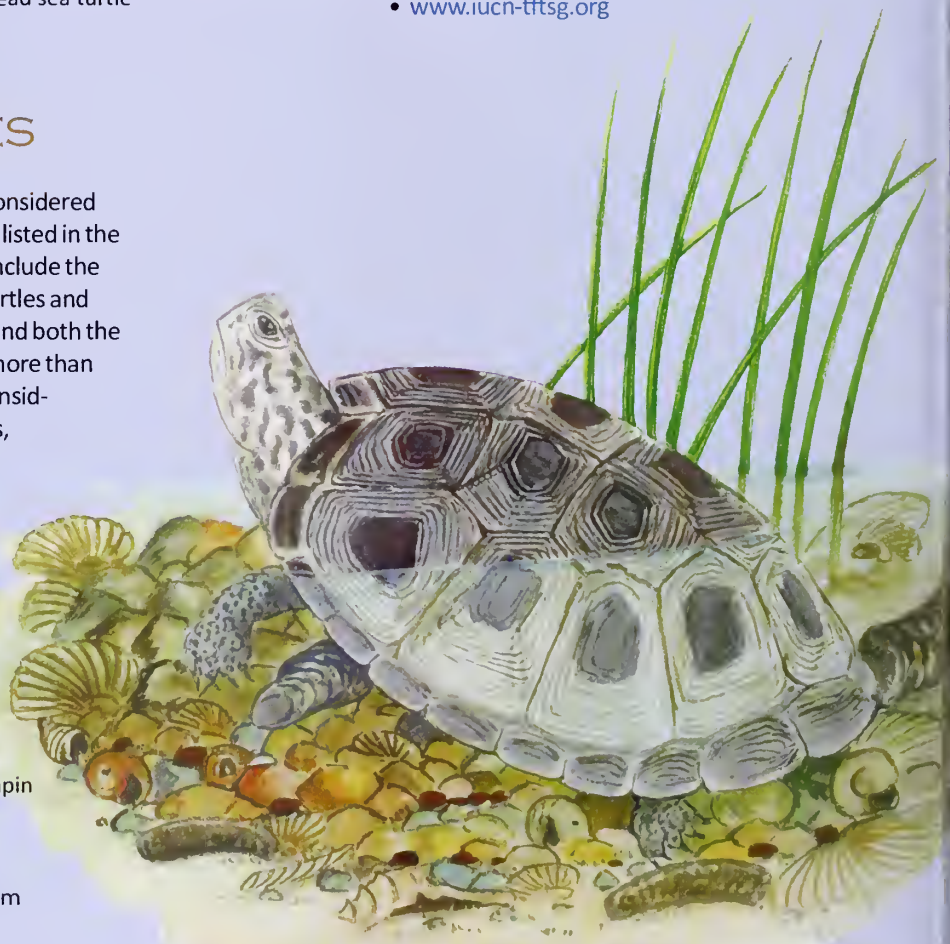
- www.turtleconservationfund.org
- www.iucn-tftsg.org

TROUBLE FOR TURTLES

More than half of Virginia's 22 turtle species are considered "Species of Greatest Conservation Need," and are listed in the state's Wildlife Action Plan. The 12 listed species include the bog turtle, two coastal turtles—loggerhead sea turtles and diamondback terrapins—multiple water turtles, and both the wood turtle and the Eastern box turtle. Globally, more than 40 percent of the world's 461 turtle species are considered threatened or endangered. For many species, extinction is a very real threat.

With their armored shells and slow-but-steady approach to life, turtles seem like they should be able to take care of themselves. Why are so many species threatened?

Slow-but-steady may be part of the problem. Most turtles grow slowly, and



Diamondback terrapin



In many ways, as outlined here, bog turtles are much like other water turtles. Their life cycle is not terribly different from more common species, such as the painted turtle. The greatest difference isn't one of behavior or size, but of habitat preference. While painted turtles are typically found in ponds, lakes, and other permanent water features, bog turtles thrive in marshy fields and shallow wetlands.

The trouble is twofold. The spread of human development—from suburban homesteads to rural cornfields—has swallowed an incredible 98 percent of the bog turtle's natural range. And, of the 2 percent that remains, natural habitat succession is gradually converting those wet meadows into shaded forest. As the trees creep closer, the turtles leave. In time, the marshy meadow will be completely overtaken by trees. It will become a forest. Eastern box turtles live in forests, but bog turtles do not.

Habitat succession is an entirely natural thing. This is nothing new. Marshy meadows have been giving way to forests for eons. Until relatively recently, this was no problem for bog turtles or other early successional species, because nature was continually creating new meadows. As some meadows were swallowed by forests, others would be created through forest fires or beaver activity. Perhaps just as important, large grazing animals like the bison that roamed Virginia's grasslands helped to keep invading trees in check.

But we've long-since hunted the last bison in Virginia. Fires are no longer allowed to burn uncontrolled. And suburbs continue to march ever further into the landscape. In the process, acres of wilderness are converted into streets, sidewalks, and manicured lawns. We have lost countless meadows and pockets of marshland as a result, and the species that depend upon them are suffering.

There is hope, however, for bog turtles and other meadow-loving species. Informed by current science, land management practices are beginning to reintroduce fire—well controlled—to the landscape. Restoration efforts are addressing issues of habitat loss and fragmentation, as well as invasive plants. And, in some places, Virginia's modern-day grazers—cattle, sheep, goats, alpacas—may be able to step in and help.

Most importantly, however, we must protect the wetlands where bog turtles are already living from further human encroachment. The highland meadows of Carroll, Floyd, Grayson, and Patrick counties are the last homes of bog turtles in Virginia. With so few places left to them, each marsh, wetland, and slow-flowing spring is essential to the survival of bog turtles in the state. By protecting these last places, while simultaneously restoring other fields and bogs, perhaps we can ensure a future where Virginia's bog turtles have more than four counties to call home. ❧

Cristina Santiestevan writes about wildlife and the environment from her home in Virginia's Blue Ridge Mountains.

Wood turtle



Eastern box turtle





©Ronda Ellcessor

CORPORATE HABITAT PROGRAM

Reaches 10-Year Milestone

by Carol A. Heiser

This spring, the Department celebrates its 10-year anniversary of the Habitat Partners® Corporate Habitat program. This program assists with the planning of new conservation projects on commercial or industrial properties and recognizes such efforts and results.

Department staff can schedule a site visit to provide guidance and recommend appropriate native plant choices and habitat improvement methods. A habitat education program or training may also be arranged for company employees. The

business then implements the project on its own timeline using its own resources. When the project is successfully completed and meets the program criteria, it is eligible for a Habitat Partners® certificate and sign. There is no fee to participate in the program.

Four different companies whose projects illustrate a variety of habitat conservation practices are showcased here. Of course, every company has its own unique needs and site parameters or constraints, but what they all have in common is a desire to improve the work environment for their employees, restore balanced wildlife



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Left, students explore nature around a constructed wetland at Boxley Quarry. Critical habitat has been created for declining amphibians like this female wood frog. Top, a drainage swale of native vegetation forms a buffer to capture runoff from the parking area at Wetland Studies and Solutions, Inc.



The Capital One meadow planting (L) and planting bed above feature native plants that attract wildlife.

habitats, and reduce long-term maintenance costs. Go to www.dgif.virginia.gov/habitat to see streaming video of each of these projects and learn more about Habitat Partners®.

Boxley Quarry–Amherst County:

For 10 years the folks at Boxley’s Piney River Quarry have worked with Mike Hayslett, a local naturalist, to restore pocket wetlands and vernal pools on the non-active portions of their property. These pools provide invaluable habitat for frogs, salamanders, and other amphibians that need moist areas to breed and live out their life cycles. The commitment to preserve the unique natural heritage on the Boxley site includes an education component, as they frequently host school field trips for children to experience nature firsthand.

Capital One, West Creek Campus–Goochland County:

This 100-plus acre site features ongoing grounds maintenance with an eye towards sustainable best practices. Capital One’s conservation and ‘be green’ efforts include no-mow zones, a campus tree farm, a blue bird nest box trail, native plantings and a new meadow garden along a wooded edge that attracts butterflies and birds. A Green Team of about 200 Capital One associates have assisted with over a dozen projects.

Wetland Studies and Solutions, Inc.–Prince William County:

WSSI has raised the bar in setting the industry standard for low-impact development (LID). Although their site is barely four acres, it boasts a green roof, a rainwater

containment system with 8,000 gallon cistern for irrigation, permeable paving with gravel detention, a centralized rain garden, and conservation landscaping with native plants throughout. Not only is the property a wildlife habitat oasis in a major urban area, but its design also ensures that any stormwater passing through the site is either intercepted or filtered in some way to improve water quality, before the remaining runoff enters a nearby stream. WSSI provides wetland restoration services and offers LID seminars and trainings for professionals in the region.

Pfizer Consumer Health Care–City of Richmond:

Small habitat “islands” have been installed in several parts of this property to break up the large expanse of lawn that’s so typical around office buildings. A perennial pollinator garden graces the front entrance, and many shrubs and trees are now part of a nature trail for employees. A rain garden has also been strategically placed to capture runoff from one of the parking areas. The company’s



Wildlife Habitat Committee meets regularly to discuss conservation matters, and each year they hold an Earth Day event for employees and their families to learn more about the outdoors. ☞

Carol A. Heiser is a wildlife habitat education coordinator at the Virginia Department of Game and Inland Fisheries.

The rain garden at Pfizer Consumer Health Care (above) collects runoff from the lawn and paved areas. Visitors to the WSSI green roof (L) routinely see butterflies, bees, and other insects drawn to flowering plants.



Fly Rod Chronicles

story & photos
by King Montgomery

"Sure, I love to fly fish, but I'd also like to do a hunting show for the Sportsman Channel," Curtis Fleming revealed as we talked in the huge, high-ceiling showroom of the Grove's Harley-Davidson store in Winchester.

I told him he barely has enough time now to host and produce his *Fly Rod Chronicles with Curtis Fleming* on the Sportsman Channel. How did he expect to double his and his crew's workload? He shrugged, but knowing Curtis, he'll pull it off somehow.

Fleming lives in Winchester and hosts the very popular TV show that he and good friend Steve Hasty shoot in the Old Dominion, in other parts of the country and, recently, overseas in such places as Belize and Mexico. Together, and with help as needed from other local videographers, they've produced almost 100 shows in the past five years.

The Show

Fly Rod Chronicles (FRC) is not your typical fishing show. A couple of guys don't just sit or stand around catching fish, congratulating each other every time one is landed. No, says Fleming, his show is more "reality fly fishing" that includes a total package of the experience both on and off the water.

One good example is when FRC films the annual Project Healing Waters Fly Fishing (PHWFF) 2-Fly Tournament held each May at the Rose River Farm near Syria. Here Fleming wades into the river with producer/cameraman Steve Hasty and visits with the combat-wounded and disabled veterans who participate in the event. No one is watching the clock.

Oh, sure, there are the grip-and-grin fish shots, and occasional chorus of "nice fish," but Fleming's *Fly Rod Chronicles* is as much about people and places as it is about fish. I try to capture the entire experience," Fleming relates. "It's about the beauty of the natural settings and the local communities."

In his episodes, Fleming has fished with local experts who know their home waters and the best barbecue establishment in town; with wounded and disabled vets eager to catch fish and tell their story; with breast cancer survivors fishing and healing through



Top, former Army Sgt. Josh Williams swings a nymph along in the Rose River, while fishing great Joe Humphries looks on. Above, Steve Hasty videos Curtis Fleming (L) and Lefty Kreh at the PHWFF tournament last May.

Casting for Recovery; with young hot-shot and older, grizzled fishing guides and outfitters; and with Fortune 500 CEOs.

Curtis Fleming has an infectious sense of humor and an affinity for putting folks at ease on and off-camera. On and off the water, he seeks and takes instruction well, and he is eager to share this knowledge with his audience. Thus, FRC always is instructional as well as very entertaining. Viewers find themselves laughing a lot.

After the fun of interviewing, fishing, and camera work, the work really begins. But it's work that producer Steve Hasty relishes. His editing studio is in his home in Burke, so he's got a good commute. Hasty will spend three or four days converting digital tape into an hour-long TV show, leaving space for the ever-present and very important commercials.

Once the video part is put together, he emails a voice-over script to Fleming in Winchester. Fleming has equipment in his home to record any necessary changes and additions to the audio portion and emails the result back to Hasty, who plugs it in at the appropriate places in the story.

Hasty then dubs in music, some of which he composes electronically on his suite of gear, to highlight various scenes in the program. He also adds titles and other graphics. Putting together a TV show provides room to express oneself artistically, and Steve has become a master at doing just that.

Once all of the audio-video work is done, and the two men are happy with the result, the show is downloaded to a flash drive and mailed to the Sportsman Channel studios in Wisconsin. The show will go on the air within a few weeks.

But back to the Grove's Harley-Davidson store in Winchester... I tagged along that day with Curtis, Steve, cameraman Russ Hasty, and three gentlemen from the store: General manager Jake Rickard, and Harley-Davidson mechanics Russ Basalyga and Justin Wheeler. Fleming and his guests would bike from Winchester to the Rose River Farm to shoot a show on the gorgeous and fertile Rose River. Fleming was astride his beloved

Curtis Fleming chats with former U.S. Marine Bill Johnson, who lost both legs in the Vietnam War. Johnson has helped with PHWFF since its inception.



During filming of *Fly Rod Chronicles*, Curtis Fleming holds a nice rainbow caught by Jake Rickard, general manager of Grove's Harley-Davidson in Winchester.

custom H-D Street Glider with a superb fly-fishing motif expertly painted on in black and silver. The rest of us drove down in a more conventional vehicle.

Douglas Dear, owner of Rose River Farm, and head fishing guide Gary Burwell met us as our mini-convoy parked near the stream. Some of the trees were showing their early fall colors, the sky was mostly blue, and the stream gurgled along with the look of fish. This stretch of the Rose teems with chunky rainbow trout and some brookies, and it provides a pastoral setting for a television show featuring bikers, fly fishing, and trout. Yes, this is reality fly fishing!

After the Harley lads suited up in hip boots and strung fly rods, Gary Burwell gave some basic casting and fishing instruction,

and the three men practiced casting for a bit before stepping quietly into the water. Initially the three took turns, and Fleming joined them in the stream for some on-camera banter. After all the filming was done, the gents were left to fish for a while on their own.

Everyone had a great time and all caught a fair number of fine trout before it was time to saddle up and head back to Winchester. Curtis, Steve, and Russ, however, would not leave just yet, because there was another story in the making just a half-mile upstream.

A DGIF team was shooting a video spot featuring Lt. Governor Bill Bolling catching trout in the Rose. The TV spot would promote Virginia's fine trout fishing and encourage people to visit and take advantage of our fine outdoor recreation opportunities.



Once the work was done, Curtis, Douglas, and Steve waded in and talked on camera with Bolling about his love of fishing. It seems that both Bolling and Fleming originally are from West Virginia coal country and settled in Virginia after college to make their careers. After more good-natured conversation, Gary Burwell stepped in to assist the lieutenant governor in finding fish. The others returned to shore and allowed Bolling a little quiet, fish-catching time in the stream—something he just can't seem to get enough of these days.

The People

Curtis Fleming was born and raised in coal mining country in central West Virginia, where his father worked in the mines and introduced him early to the outdoors. After college, he spent over 15 years in education and worked with troubled youth. Twice a year he took six students on a fly-fishing adventure back to his home grounds near Beverly, West Virginia. The students qualified for this much sought-after excursion by writing the best essays on subjects selected by their teacher.

Fleming left education to serve as president and CEO of a gas and oil company. Here he learned that good business practices are about the people you work with, both inside and outside the company. And he kept his hand in fly fishing, camping, and hunting, all the while dreaming about someday doing a television show on the outdoors.

His time would come when he and Steve Hasty were introduced by a mutual friend, and the two set out to do FRC for the Sportsman Channel. Now, after five years, the program has garnered a number of significant broadcasting awards, including the Best Fishing Episode prize from the Sportsman Channel for a show on Project Healing Waters Fly Fishing; the Best Broadcast by West Virginia's Division of Tourism; and the Best Fishing Show and Best Humor awards from The Bugle Association. And this just recently announced: Fleming won the Sportsman Channel's coveted Best Show Host for 2010 award.

Producer and videographer Steve Hasty, of Burke, is a native Virginian and a lifelong angler. He caught his first fish, a bluegill, with a stick he cut, a piece of old fishing line, and a



The Harley-Davidson crew joins the filming crew and Douglas Dear at Rose River Farm.

baited hook. Hasty does much of the post-production work in addition to his work on camera, where he is a master of capturing the moment.

It's always better to have two or more cameras working a shoot, and Fleming and Hasty can call on some of the area's best when needed. Wade Shambaugh, a deputy sheriff in Morgan County, West Virginia, has hunted and fished all his life. He's been an avid outdoor photographer for over 25 years and took up videography to work with Curtis and Steve. Gene Lewis, from Cross Junction, handles a camera when called and spends as much time as he can hunting, fishing, skiing, trail biking, and "whatever else has to do with the outdoors." James Montgomery (no relation to the author) is a cameraman and assistant producer. An avowed outdoors addict, he also has "a passion for filming and turning it into artwork." He lived in Nashville for four years, where he produced music and wrote songs. He is an accomplished guitarist.

Curtis Fleming and The Crew (as they call themselves) are very proud of *Fly Rod Chronicles*. One of the best compliments they've ever received came from a viewer who said: "After we watch your show, we feel like we were right there on the stream with you." High praise, indeed.

As for Fleming: "You ask me if I'm living the dream. My office is out there in the stream, it could be anywhere. I'm doing what I love." 🍷

King Montgomery is a freelance outdoors/travel writer and photographer from Burke and a frequent contributor to Virginia Wildlife. Contact him at kingangler1@aol.com.

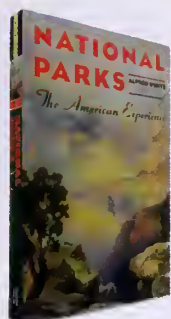
Contacts:

Fly Rod Chronicles with Curtis Fleming,
www.flyrodchronicles.tv, (540) 550-5151
Sportsman Channel,
www.thesportsmanchannel.com



Lt. Governor Bill Bolling fly fishes for trout at Rose River Farm as Curtis Fleming and Douglas Dear interview him about his love of angling.

AFIELD AND AFLOAT



Outdoor Classics

by
Beth Herter

National Parks: The American Experience, 4th Edition

by Alfred Runte

2010 Taylor Trade Publishing

Illustrated

\$16.95

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"Beginning in the middle of the nineteenth century, a small group of visionaries and idealists pioneered a unique experiment in landscape democracy—the national park idea".

"To be sure, the national park idea as we know it did not emerge in finished form. More accurately, it evolved. The debate remains: What should the nation preserve—and how?"

— Alfred Runte

This is the fourth edition of Alfred Runte's survey of the history of our national parks system, how it evolved, and how perceptions about natural wonders and the utilization of wild spaces continue to evolve over time. For readers familiar with the excellent slate of documentaries on public television, Alfred Runte was a major advisor to Ken Burns during the development of his documentary "National Parks: America's Best Idea."

Runte's prose appeals to the visually inclined and, as I was reading, I was continually reminded of the many interpretive natural history displays, dioramas, and Viewmaster® disks that engaged my young imagination as I began to discover the riches of our natural world. During the 1960s, as my family traversed portions of the Blue Ridge and Smoky Mountains during our summer vacations, I

always felt a little thrill as I viewed the iconic arrowhead-shaped tablets of the National Park System through the windows of our green Ford Falcon. They signaled that some adventure or exciting vista was just around the corner.

But our national parks, with their dramatic landscapes and preserved natural areas are products of a seemingly endless dialog among shifting and competing interests, and this topic forms the core of Runte's research. From the noble instincts of Thomas Jefferson, John Muir, and Teddy Roosevelt, to the baser tactics of ignoble Regan-era Interior Secretary James Watt, it is always a push-pull between aesthetic, scientific and environmental concerns, and the forces of the marketplace.

Runte points out that, over history, natural wonders such as Yosemite were selected and set apart as hallmarks of national pride, a way to gain scenic 'bragging rights' and be able to compete with, say, the Swiss Alps. At other times, what defined the need to preserve natural areas expanded into thinking about green spaces within urban environments. It is especially interesting to see how foreign travelers and journalists viewed American attempts at domesticating wild wonders like Niagara Falls for the sake of tourism. Even in the 1800s, American and foreign journalists and artists repeated the now all-too-familiar phrase: "You must come and see some of these areas now... before they are completely spoiled." Were bragging rights the point, or was nature itself the greater national heritage?

The history of the impact of public access is also covered; Runte takes us from horses, to trains, and to the modern questions of snowmobiles and all-terrain vehicles. Should access always be easy, or is it important for at least a majority of visitors to make some more strenuous personal effort to enjoy nature's gifts?

Given the ever-changing and often contentious national dialog about conservation issues, it is important to read this volume before taking sides. This book is necessary and enjoyable homework.

VIRGINIA WILDLIFE OUTDOOR CATALOG



2010 Limited Edition Virginia Wildlife Collector's Knife

Our 2010 Collector's Knife has been customized by Buck Knives and features a bobwhite quail in flight. The elegant, solid cherry box features a field scene. Knives and boxes, made in USA.

Item # VW-410 \$90.00 (plus \$7.25 S&H)



2009 Limited Edition Virginia Wildlife Collector's Knife

Our 2009 Collector's Knife (customized by Buck Knives) features a wild turkey in full strut. The elegant, solid cherry box features a forest scene. Knives and boxes, made in USA.

Item # VW-409 \$85.00 (plus \$7.25 S&H)

To Order visit the Department's website at: www.HuntFishVA.com or call (804) 367-2569. Please allow 3 to 4 weeks for delivery.

Seedlings of Learning Grow with Dominion's *Project Plant It!*

As the home and habitat for much of Virginia's wildlife, trees are essential to the ecosystem while also beautifying the commonwealth. For five years, Dominion's *Project Plant It!* program has educated schoolchildren about the important role of trees in the environment and more than 100,000 students have received tree seedlings to plant on Arbor Day. Experts from the Virginia Department of Forestry estimate that 250 acres of new forestland would be created if all 100,000 of those seedlings are planted.

The *Project Plant It!* kit for teachers in participating school systems includes lesson plans aligned with Virginia SOLs for third-grade core curriculum subjects. An interactive website, www.ProjectPlantIt.com, contains videos, games and fun family activities. Lesson plans can be downloaded from the website and teachers can order free tree seedlings for their classrooms.

2011 Virginia Hunter Education Challenge

The annual Hunter Education Challenge will take place at the Holiday Lake 4-H Center in Appomattox, April 29 through May 1. Contact David Dodson at david.dodson@dgif.virginia.gov for more information.



A competitor at the 2010 challenge prepares to take aim during the rifle event.

SEASONAL ALMANAC

STELLAR EVENTS

APRIL

- 3 – New Moon / Black Bears Emerging from Dens
- 15 – Plant Sunflowers for Doves
- 17 – Full Moon
- 21 – Shad, Herring, White Perch Fishing Peaks
- 27 – First Bluebird Broods Fledge

JUNE

- 1 – New Moon
- 3 – White-tailed Fawns Born, Turkeys Hatching
- 3-5 – Free Fishing Days

MAY

- 3 – New Moon
- 12 – Quail Nesting
- 16 – Shorebirds Nesting, Eastern Shore
- 17 – Full Moon
- 27 – Spot, Croaker Fishing Picks Up

JUNE

- 15 – Full Moon
- 21 – Summer Solstice
- 22 – Bullfrogs, Green Frogs Calling

BURSTING AT THE SEAMS

Every spring, a riot of colors and sounds emerge that can leave a casual bystander feeling almost dizzy. In Virginia, many wildlife species are going about the business of mating. Perhaps the most dramatic but rarely witnessed courtship display occurs above our heads, in mid-air, when bald eagle pairs clasp talons and somersault while plummeting hundreds of feet. Other animals are focused on parenting their young: from black bears and foxes to salamanders and songbirds. From my perch northeast of Richmond, I take great delight in the feeding and protective behaviors of a pair of bluebirds raising their chicks.

After an extended period of hibernation, several species of snake are on the move, looking for a mate. Swamps and moist woodland areas and stream edges come alive with the sounds of frogs breeding—the green tree frog, the American bullfrog, and the upland chorus frog, among others. And by late May, species such as the Eastern box turtle and Eastern painted turtle will begin nesting.

Spring also can bring violent bouts of weather—rains, in particular—that sweep a torrent of surface water into area rivers, causing them to swell beyond their banks.

Fishing is good when things settle down, especially in tidal reaches where anadromous fish like shad and striped bass are making their journey up and down rivers to spawn. On inland lakes and reservoirs, this time of year can bring smiles to anglers casting for crappie or smallmouths or bluegills. Jumpstarting all of this activity, of course, is the perennial hatch of mayflies and other aquatic species favored by fish.

Meanwhile, hunters of the two-legged variety are taking a break; many are working on their honey-do lists until April 9, when spring gobbler season begins. Early spring is a great time to spend in the woods and meadows, before thick undergrowth and thorny vines take over and before pesky mosquitoes and other insects return. Look for animal sign on tree bark and among leaf litter, as well as native wildflowers like pink lady's slipper and toothwort that bloom only during a narrow window of time.

Wherever your trail may end, be sure to take your trash, your shell casings, and your old fishing line and bait containers with you. As always, the best way to show your appreciation to the animal world is to leave no trace of your presence in it.

— SHM



©King Montgomery

Nation's River Bass Tournament

by King Montgomery

It was easy to spot the kids fishing in the 2010 Nation's River Bass Tournament on the tidal Potomac River on May 26—they all were wearing bright international orange life vests provided by the Boat Owners Association of the United States (BoatUS). The children's fishing lines reflected the bright sun as bass lures were cast to the Virginia, DC, and Maryland shorelines; and the sun also glistened off of a lot of teeth because the kids usually were grinning from ear to ear.

Twenty pre-teens fished for Potomac largemouth bass from 20 colorful and sleek bass boats skippered by volunteer guides. A guest angler, a representative of one of the event's sponsors, also fished and assisted the young anglers. The DGIF was a sponsor, and director of fisheries Gary Martel was on hand in one boat with a guide and young fisher who managed to catch a lot of nice fish, but not the big one.

The tournament, held out of National Harbor in Prince Georges County, MD, just across the river from Alexandria, was organized as a fundraiser by Living Classrooms of the National Capital Region comprising Virginia, Maryland, and the District of Columbia. Through their schools, hundreds of youngsters wrote essays on outdoors topics, and the top 20 winners were selected to ride the bass boats and fish the tournament. And

over 200 additional children were bussed in—remember this was a school day—to take educational boat rides, to participate in hands-on educational exhibits, to witness the tournament weigh-in, and to have a nice lunch at the end of the long pier at the scenic National Harbor.

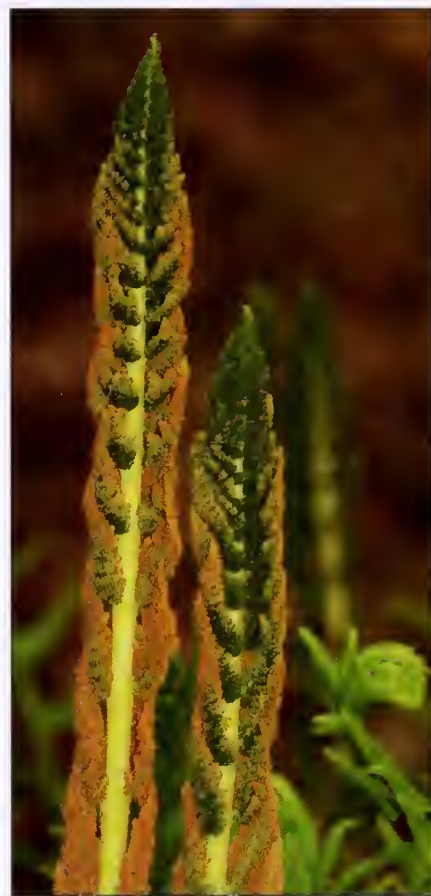
Living Classrooms Foundation, founded as a non-profit organization in 1985, operates “for the benefit of the community, providing hands-on education and job skills training for students from diverse backgrounds, with a special emphasis on serving at-risk youth.” The program hopes to inspire young folks using urban, natural, and maritime resources as “living classrooms,” and each year works with over 18,000 youth and young adults in the region.

Sponsors for the tournament included the U.S. Fish and Wildlife Service (USFWS), Virginia Department of Game and Inland Fisheries, Maryland Department of Natural Resources, Washington DC Department of the Environment, National Harbor/The Peterson Companies, PEPCO, Mirant Mid-Atlantic, FLW Outdoors, Gaylord National Resort & Convention Center on the Potomac, BoatUS, American Sportfishing Association, and the Interstate Commission on the Potomac.

In 2009, a USFWS study found that children spend over six hours a day watching television or using various electronic devices. They aren't spending any time outside playing, and certainly are not taking advantage of all the outdoors has to offer. This widespread “nature deficit disorder syndrome” in our youth does not bode well for the future of the natural resources we all love. The Nations River Bass Tournament is an event that supports the “Let's Move Outside” initiative launched by First Lady Michelle Obama. The idea is to connect youth to their natural surroundings through a combination of educational, physical, and recreational activities. And Living Classrooms is doing just that.

For more information on Living Classrooms of the National Capital Region see www.livingclassroomsdc.org. For information about the 2011 bass tournament on June 3rd, contact Mari Lou Livingood at (202) 488-0627.

IMAGE OF THE MONTH



Congratulations go to Jack Johnston of Williamsburg for his beautiful close-up of spores forming on the underside of an emerging Cinnamon Fern leaf photographed last April in his backyard along the shore of Lake Pasbehegh in James City County. Canon EOS 40D digital SLR camera, Canon EOS 180mm f/3.5L macro lens, ISO 400, 1/90th, f/9.5, flash added.

You are invited to submit one to five of your best photographs to “Image of the Month,” Virginia Wildlife Magazine, P.O. Box 11104, 4010 West Broad Street, Richmond, VA 23230-1104. Send original slides, super high-quality prints, or high-res jpeg, tiff, or raw files on a disk and include a self-addressed, stamped envelope or other shipping method for return. Also, please include any pertinent information regarding how and where you captured the image and what camera and settings you used, along with your phone number. We look forward to seeing and sharing your work with our readers.

Hunting on the Edge of Uncertainty

by Tee Clarkson



I was on my way back from Tangier, having spent the better part of the day dredging oysters for a piece in this magazine. It was a Friday and unseasonably warm for the first week of October. I drove with the windows down. I could still taste the salt air and had that lingering sense of peace that comes easy after a day on the water, even a day spent helping dredge oysters. In a week the short duck season would open, which I mark as the beginning of fall and time to grow the winter beard my wife hates so much.

Just one of the many things I love about Tangier is the lack of cell service. Not only can you not receive or make a call there, the island has a way of eating all your battery power—even if you cut your phone off. It feels like the island itself is making a last stand for a dying way of life. Still, I couldn't help plugging my phone back in for the ride home and waited for enough charge to turn it back on. When I did, it started bouncing and buzzing on the seat next to me.

Three missed calls from the same person, who isn't your wife, is not a good sign. Even if it is your wife, it's not a good sign, but doesn't necessarily signify anything of dire importance. Three calls from a guy in the same hour, with just a single message saying, "Call me when you get this," made me nervous.

Scrolling through my directory to find Joe's number, I still didn't think too much of it. He probably wanted to get the kids together or grab a bite to eat. The phone rang and quickly he picked up. "Lenny's got cancer," he said.

When I hung up the phone, it was clear the world had changed. Gone was the unseasonably warm weather, the good feeling of rolling down the road with the windows down on a Friday afternoon, the thought of early duck season, the lingering feeling of contentment from a day on the water. All of it was gone. The world had quickly turned cold, gray, shadowy, and as uncertain as it had been in a while.

I have to be honest, my thoughts turned to the worst. Lymphoma. It certainly did not sound good. One of my brother's best friends had recently died of

leukemia in his early 30s. He was a guy I had spent several weeks with in Nebraska just a few years prior, chasing wild pheasants over miles of knee-deep grass. As it turned out, that had been one of his last hunting trips.

There are friends, and then there are friends you hunt with. There is a difference. There is a distinct bond formed over sunrises, setting decoys, and seeing a pair of mallards lock into your spread. I could not help but wonder if Lenny and I would share another morning in the duck blind.

Over the course of the next week, I learned more about Lenny's prognosis. Fortunately it was good. His cancer was treatable. Remarkably, after two rounds of chemo, Lenny and I sat in a swamp on opening day of duck season. I could tell he felt miserable, but he didn't once complain.

We hunted a few more times during the season when he felt up to it. The chemo gradually took its toll. By the middle of the season he had lost his hair and was tired most of the time. Still, both of us wanted to get out there.

There is an old saying, "Live each day like it's your last." With that comes a heightened appreciation of the moment, but also a sadness and uncertainty that is hard to shake. That's how most of the duck season went last year.

Just a few days before Christmas, I was at my parents' house when my phone buzzed in my pocket. "100 percent cancer free." That's all the text read. That was all it needed to read. I had to leave the room to collect myself before returning to share the good news. A few weeks later I was back at Tangier with a group I go with each year. Lenny and I shared a blind the first day, stared out over the bay, searched the sky for ducks, and laughed good free laughs, without the burden of uncertainty. The easy sense of peace that accompanies a day on the water was back, but no hunt together would ever be quite the same.

Tee Clarkson is an English teacher at Deep Run High School in Henrico Co. and runs Virginia Fishing Adventures, a fishing camp for kids: tclarkson@virginiafishingadventures.com.



It was spring and the members of the Lonesome Dove Hunt Club & Literary Society had their minds on what every male had his mind on... love... *Puppy Love*, that is. Each member had been combing the classifieds and Internet for retriever, pointer, setter, spaniel, or hound puppies. Hope springs eternal in a dog man's chest, and each man hopes that the next pup will be the scion of the fields, a dream to shoot over and, more importantly, a dog he can brag on.

There wasn't a puppy-laden county in Virginia which the members had not either visited personally to look at different litters or at least made inquiries. Doc Morrisette had been searching for Brittany pups as far as the Eastern Shore, and Reverend Wray had heard of promising litters of setter puppies in Southampton, Brunswick, and Fluvanna counties. R.B. had headed to Cumberland and Amherst looking for blue ticks and black and tan hounds. Mr. Debit, the club's accountant, got wind of a fine litter of Boykin pups down in Halifax and another just west of Roanoke. He was eager to try out one of those little, high-energy, flushing dogs for turkey hunting.

So, the Lonesome Dove Hunt Club & Literary Society decided to meet one Saturday morning to discuss their potential puppy purchases at the Busted Barrel Skeet Range—giving their wives a break from being away from home most of the week. The members thought that if “Absence makes the heart grow fonder...,” then consistently being out of the house and away from home would only *improve* their marriages.

Spread out on the table in the meeting room were the pedigrees of the puppies under consideration. Because each member thought that the other members looked to them for advice on anything from the right lure for

catching fish, the best shotgun for grouse hunting, or the proper ballistics for anything from teal to turkey, he was more than willing to express his opinion on each dog's pedigree. It wasn't long before the conversation deteriorated into a heated argument as to which was better: redbones vs. black and tans, beagles vs. bassets, flushing dogs vs. pointers and setters.

“Give me a flushing dog that will retrieve what I shoot,” declared Mr. Debit. “I don't want to have to pray that I will find that bird on my own.” This was a clever jab at the reverend, who was passionate about setters.

“You looked like you got a lot of religion, all of a sudden, when that spaniel flushed that covey of quail that exploded right under your nose,” retorted the minister. “The whole county heard you screamin' to be saved when you thought Satan had opened the door to bring you home! I like a dog that gives me *some kind of warning*.”

“You two dandies need to come along hunting with me if you want to see how a *real* dog hunts,” interrupted R.B. “A coon hound has to have an excellent nose—and brains to

match—when hunting in a swamp at night. There is nothing like a good hound singing in the night while chasing a coon. Now that is *real hunting*!”

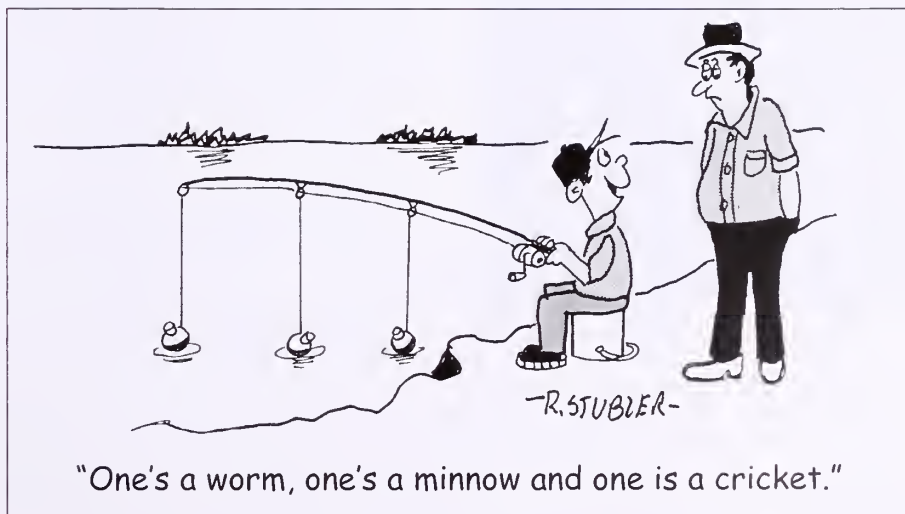
“Give me a quiet little partner like a Boykin for turkey hunting,” countered Mr. Debit. “I want an enthusiastic, efficient little hunter that doesn't take up a lot of room and does not cost an arm and a leg to feed.”

Meanwhile, Ol' Jones just sat, watching the dog debate, and said nothing—which was pretty unusual for him. Finally he spoke up. “Gentlemen, I applaud your due diligence and research relative to the aforementioned puppy acquisitions. However, I believe you may have put the proverbial ‘cart before the horse’. One of the reasons we all like dogs is that they are a social animal that requires little from us as a life partner. Dogs mainly want to be treated kindly, fed regularly, and shown a bit of affection now and then. We men, however, are attracted to another social animal that requires a great deal more attention, and—in light of our absence of late from the den, so to speak—I would ask if any of these additions to the household have been run by the *real* decision makers?”

There was a quiet pause. Then, hurriedly, the members excused themselves after realizing that there were flowers to buy, long overdue home repairs that needed attention, gardens to weed, and dinner reservations to make.

Keep a leg up,
Luke

Luke is a black Labrador retriever who spends his spare time hunting up good stories with best friend Clarke C. Jones. You can contact Luke and Clarke at www.clarkecjones.com.





Before I Hit the Shutter I Should Ask Myself...

I have been teaching lots of workshops these days and have discovered something. Participants using a digital SLR camera really want a guide to remind them of what they need to think about *before* taking a photograph. After much thought, I came up with a list that I would like to share with my readers. I hope this will help you! Happy Shooting.

Lynda's List of Things to Remember Before You Hit the Shutter:

1. Do I have spare memory cards and batteries with me? For my flash too?
2. Is my memory card re-formatted and ready for shooting?
3. Am I set up to shoot in the **File Format** I want? (RAW or JPEG?)
4. What **White Balance** should I set for the file format I've selected and/or the situation?
5. What **Metering Mode** should I have for what I'm getting ready to shoot?
6. What **Drive Mode** should I pick for this?
7. What **ISO** should I choose? Will it be too grainy for the shot?
8. What **Shooting Mode** should I use: Manual, Aperture, or Shutter Priority? NO AUTO!!!
9. If I'm using **Aperture Priority**, how much do I want in focus in front of and behind my subject? Which aperture should I use to get the **Depth-of-Field** I want?
10. For moving subjects, do I want to stop action, pan the shot and blur the background, or blur the subject? What shutter speed should I choose in **Shutter Priority** (or Manual) to do this?
11. Do I need to use a **Tripod** or can I hand-hold the shot? Will IS or VR help or not?
12. What type of light will I be shooting under: harsh or soft? Where is it coming from: front, side, or back? Can I move to improve the light? Should I come back later or wait for different light conditions for shooting?
13. What does the in-camera **Light Meter** indicate I need to do to make a proper exposure?
14. Will I be able to hold detail in the shadows and highlights with the exposure I chose?
15. Should I change the shutter speed, aperture, or ISO to achieve a better exposure?
16. Did I remember that for white subjects I need to open up a stop or two and for black/dark subjects I need to close down a stop or two? I can do this by adjusting ISO, the shutter or aperture, or the exposure compensation.
17. Do I want to **Bracket** my shots? If so, how should I do this?
18. Should I use a **Flash** to add light to the situation? How about a reflector?
19. Am I focused on the **Focal Point** of my photograph?
20. Is my subject out of the center of the frame? Is it looking into or out of the frame?
21. For my composition should I use the **Rule-of-Thirds** or not?
22. Is there anything I can use like tree branches or grass to frame my subject?
23. Are there any distracting elements in the foreground or background? Can I get rid of them?
24. Is my horizon line straight and out of the center? (Don't forget the 1/3-2/3 rule for landscapes.)
25. Is this the best angle for this photograph or should I try another?
26. Is my image in focus and as sharp as it can be? What can I do to make it sharper?
27. Where did I leave my lens cap?



Getting into the habit of bringing backup memory cards and camera and flash batteries is always a good idea. I also make sure to bring extra quick release plates for my tripod and the camera and flash manuals!

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On the Water

By Tom Guess

Big Shoes to Fill



I would be remiss if I didn't start the boating season off by paying tribute to Charlie Sledd for his work on your behalf as the Boating Law Administrator (BLA) for Virginia. Charlie held this position for the past ten years. He retired on February 1 after serving the commonwealth for over 36 years—leaving some big shoes to fill. Thank you, Charlie!

The BLA is responsible for the administration of the recreational boating safety program and represents Virginia on a state, regional, and national basis to ensure our participation and collaboration on boating safety laws, issues, and policies being addressed across the U.S. The BLA acts as a liaison to the U. S. Coast Guard regarding management of Recreational Boating Safety programs and federal boating safety grant funds. As such, he is the principal contact for interaction with the U.S. Coast Guard, the U. S. Coast Guard

Auxiliary, the U. S. Power Squadrons, and a host of other organizations and boating partners on your behalf. Most importantly, the BLA is the representative for boating at the National Association of State Boating Law Administrators (www.NASBLA.org). That organization approves and standardizes boating safety courses nationally, and serves as the primary resource for boating safety information and analysis for the Executive Director of this Department, the Board of Game and Inland Fisheries, the Office of the Attorney General, the Virginia General Assembly/Legislative Services, and the Secretary of Natural Resources.

On November 1, 2010 I assumed the duties of the Boating Law Administrator for Virginia and wanted to take this opportunity to let you know a little bit more about me. I came to the Department in 2008 after retiring from a 21-year career with the U.S. Coast Guard. My last assignment was as the Officer In Charge of Station Milford Haven in Mathews County. While in the Coast Guard, I spent the majority of my career working in maritime law enforcement and search and rescue operations on the water in a variety of locations: Virginia, North Carolina, and Alaska. I hold a 100 Ton Master's License (Captain's License) with a commercial towing endorsement.

As you may know, Virginia is entering its third year of phasing in our education compliance requirement. This law requires all operators of PWC and motorboats with motors of 10 hp or greater to eventually

complete a boating safety course that is accepted by the Department. This July 1 all operators of Personal Watercraft (jet ski) 50 years of age or younger and all operators of motor boats with motors of 10 hp or greater must meet that requirement as well as carry their certificate or card on-board when operating such watercraft. This safety course can be found on our website at: www.dgif.virginia.gov/boating.

Don't hesitate to contact me if I can be of service at tom.guess@dgif.virginia.gov. I look forward to serving you in my new capacity. Until next time: Be Responsible, Be Safe, and Have Fun!

Tom Guess, U.S. Coast Guard (Ret.), serves as the state boating law administrator at the DGIF.



FreeFoto.com



Dining In

By Ken and Maria Perrotte

Moose Noses and Road Kill – Must be April

Moose Nose Soup

2 tablespoons butter
3 leeks, cleaned and chopped
½ large onion, chopped
2 potatoes, peeled and chopped in 1½–2 inch cubes
(we like to use russets)
1½ cups chicken stock or broth (low salt)
1½ cups water
½ teaspoon dried tarragon
¼ to ½ pound moose noses, crumbled, or sliced and cubed
½ teaspoon crushed black pepper/Salt to taste
3 tablespoons whole milk

Prepare leeks by removing the dark green upper parts and cut off the root. Slice the leek several times vertically from the tips to almost the bottom. Spread the strips, washing under tepid running water. Shake off excess water and chop. Chop the onion. Melt butter over medium heat. When butter foams, add leeks and onion. Reduce heat to low and slowly cook vegetables until soft (about 10 min.). Add water, broth, tarragon, and potatoes. Turn up heat and bring to a boil. Then reduce heat and simmer about 10 or 12 min., until potatoes are soft. Mash the potatoes in the soup with a hand masher. Add cooked moose noses, pepper, milk, and salt. Let sit for 10 to 15 min. before serving to allow moose noses to flavor the soup. Makes 4 - 5 servings.

If you don't like the slightly lumpy texture, or want to save about 10 min., instant mashed potatoes can be used to thicken the soup. Follow directions but omit the "real" potatoes. Simmer for just 2 to 3 min. and then add about ½ cup of instant mashed potato flakes. Continue recipe as above.

Note: The recommended substitute for moose noses is venison sausage. We like to use a mix of smoked and Italian, or breakfast.



Road-kilt Raccoon Roll-ups

½ pound of raccoon loins, cleaned and skinned
3 tablespoons olive oil, divided
1 teaspoon minced ginger
3 cups shredded cabbage (about ½ head)
⅓ cup shredded carrots
⅓ cup finely chopped mushrooms
2 tablespoons good quality soy sauce
12 egg roll wrappers
Vegetable oil for frying
Hoisin sauce
Sesame seeds (optional)

Heat 1 tablespoon of olive oil in large pan over medium heat. Cook the coon meat, turning to brown both sides until medium, about 5

to 8 min., depending on size. Remove meat and let cool; dice into ¼ inch pieces, ending up with 1 to 1½ cups.

Meanwhile, wipe out pan and add remaining 2 tbsp. olive oil. Heat over low heat and add the ginger. Let ginger cook for 2 min., but don't brown. If the ginger starts to brown, turn off heat and let ginger sit in the oil. Then, heat over medium low heat and add vegetables. Sauté until soft, about 10 min., then add chopped raccoon and soy sauce. Cook another 2 min., stirring to mix.

On a flat surface, lay a spring roll wrapper with point facing you. Moisten edges with water and put 2 tablespoons of filling onto bottom half. Fold bottom point over, fold side points in, and roll up, lightly pressing to seal. Repeat with rest of the wrappers. Heat about ½-inch of vegetable oil over medium heat. Cook rolls for 2 or 3 min., turning as needed, until golden brown. Drain on paper towels. If desired, toast sesame seeds in a clean pan over medium heat for a few minutes, shaking several times to redistribute and brown. Serve with hoisin sauce; garnish with toasted sesame seeds. Makes 1 dozen egg rolls.

Note: Recommended substitute for raccoon loin—duck breasts. This is a good recipe for some of the ducks many consider marginal for roasting, such as bluebills (scaup).

Fish Brain Tarts

½ teaspoon salt
1½ cups all purpose flour
½ cup shortening
3 tablespoons cold water
2 eggs, beaten lightly
1 cup sugar
⅓ cup melted butter
1½ teaspoons lemon juice
1 teaspoon vanilla extract
1 cup chopped fish brains
3 tablespoons cherry or apricot preserves

Preheat oven to 400°. Mix salt and flour, and cut in shortening until pieces are ¼-inch or smaller. Sprinkle cold water, a little at a time, and toss with a fork to mix into dough. Form dough into a ball and roll out on a floured surface tress. Cut into 3-inch circles and press into ungreased muffin cups.

Mix eggs, sugar, butter, lemon juice, and vanilla. Stir in fish brains. Put a tablespoon of filling in each tart and bake at 400° for 14 to 17 min. Top should be golden and filling should appear set. Cool and remove from pan. Top each tart with a dollop of favorite preserves. Makes 2 dozen tarts.

Note: Recommended substitute for chopped fish brains—shredded coconut.

April Fool's!



VIRGINIA'S NONGAME WILDLIFE PROGRAM

Nongame Tax Checkoff Fund

Celebrate the 28th Anniversary of Virginia's Nongame Wildlife Program by helping to support essential research and management of Virginia's native birds, fish, and nongame animals.

If you are due a tax refund from the Commonwealth of Virginia, you can contribute to the Virginia Nongame Wildlife Program by simply marking the appropriate place on this year's tax checkoff on the Virginia State Income Tax form.

If you would like to make a cash donation directly to the Virginia Nongame Wildlife Program using a VISA or MasterCard, you can visit the Department's website or mail a check made out to:

Virginia Nongame Program.

Mail to:
Virginia Nongame Program
4010 W. Broad St.
Richmond, VA 23230-1104

***Remember
that this is the year
you can make a difference
by helping to
support the management
of Virginia's wildlife.***



Virginia Lottery Photo Contest

Congratulations to Jim Deal of Chesapeake, who took first place in the Virginia Lottery photo contest held this past winter. Contest submissions featured the best of Virginia's wildlife and participants confirmed the broad interest across the state in supporting our native animals.



YearOfTheTurtle.org

***Their future
is in our hands.***

Turtles have been around for so long, they have seen the dinosaurs come and go. Unfortunately, many species of turtles may not see the end of this century. Of the 461 known species of turtles around the world, almost half are threatened or endangered. The global crisis can be attributed to the loss or degradation of habitat, over-collecting for the pet and food trade, and impacts from invasive species, highway mortality, pollution, and climate change. To raise awareness about the global turtle crisis, 2011 has been designated the "Year of the Turtle."

Although the Department has been actively studying and monitoring many of the 23 species of turtles that inhabit Virginia, we need your help in protecting local populations. Suggested below are ways you can help:

- Don't take them home. Removing turtles from the wild to keep them as pets can seriously damage the local population.
- Don't release pet turtles. Released pet turtles such as the non-native, red-eared slider can cause serious problems for native turtles.
- Help a turtle across the road. If you can safely stop, place the turtle on the side of the road in which it was heading. Do not relocate it.
- Avoid mowing *tall* grass during spring and summer. Every year, many turtles are injured or killed as a result of mowing activity.
- Provide habitat. Box turtles often use brush piles as hibernation sites.
- Poaching of turtles is a serious threat. Every year, thousands of turtles are illegally removed from the wild. Report suspicious activity to 1-800-237-5712.

To learn more about the turtles of Virginia, please visit the websites below:

- Virginia Department of Game and Inland Fisheries, www.dgif.virginia.gov
- Virginia Herpetological Society, www.virginiaherpetologicalsociety.com
- Partners in Reptile and Amphibian Conservation, www.yearoftheturtle.org

Magazine subscription-related calls only 1-800-710-9369 ♦ Twelve issues for just \$12.95
All other calls to (804) 367-1000; (804) 367-1278 TTY



2011 Kids 'n Fishing Photo Contest Big Prize Packages!

Generous prizes, provided by Green Top Sporting Goods and Shakespeare, will be awarded to 1st, 2nd, and 3rd place winners in each age category.

- ★ Children in the picture must fall into one of the following age categories when the picture is taken: 1–5 or 6–10.
- ★ Photos should not be more than one year old and must be taken in Virginia. Only one photo submission per child.
- ★ Submit photo on photograph quality paper. No CD's accepted. Photos should not exceed 4" X 6".
- ★ Attach a piece of paper to back of photo and include: name, age, address, phone number, and fishing location. **Please do not write on the back of the photographs.**
- ★ Children in a boat must be wearing a lifejacket, properly buckled or zipped.
- ★ **A Contest Release Form (PDF) must be submitted along with the photograph.**
Go to www.HuntFishVA.com for release form and complete contest details.
- ★ Photos must be postmarked on or before June 18, 2011.
- ★ Send entry to 2011 Kids 'n Fishing Photo Contest, VDGF, P.O.Box 11104, Richmond, VA 23230-1104.
- ★ Judging will take place in July and winners will be posted on the DGIF website.